

ON A COLLECTION OF BIRDS FROM TURKANALAND

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Before we come to the study of the wonderful and interesting collection of bird life contained in this article, let us have an idea of the road to the district from which the collection comes and the class of country we pass through. There are two main routes from Nairobi—viz., via Londiani, Eldoret, Kacheliba (a small administrative post on the north-east slopes of Elgon), and Moroto; or via Kisumu, Jinja, Namasagali, the Nile and Lake Kioga steamer service to Lale Port, Soroti, and on to Moroto.

The first-mentioned route is not the generally travelled one, as it entails a much longer period of *safari*, and the second is the one that concerns us. The journey from Nairobi by train and on to Jinja by the steamer *Clement Hill* will be already too familiar to the reader to need any further description. From Jinja you take the train again on the Busoga Railway to Namasagali, a port established as headquarters of the Nile-Kioga Lake Service. The distance is approximately 60 miles, and, generally speaking, the country is slightly undulating and scrubby with long grass. The railway follows the general line of the Nile, and at Namasagali the river is a fine wide stream. At Namasagali you embark on the steamer *Stanley*. To one unacquainted with Africa and her ways, you would have grave doubts when embarking, and would wonder in what depth of water you would finish up! but in reality the *Stanley* is very comfortable for travelling on the Lake and the Nile, and is just another instance of making the means meet the end.

To reach Lale Port, one has a trip right round Lakes Kioga and Kwania, touch at all the ports, the trip in general being very interesting—especially if the steamer is held up in the *sudd* for a few days and food runs short! Lale Port being

our present objective, we disembark there and say good-bye to most good things of life.

From Lale we trek to Soroti, a distance of 12 miles, with a good road suitable for motor-cycles. Here there is a pretty station with a most hospitable D.C. and A.D.C., and also a Medical Officer.

Porters for the *safari* to Moroto are arranged for here and are quickly forthcoming. All preparations being made for a six days' *safari*, we start and travel via Werra, Komolo, Katakwe to Adechal, which brings us to the end of our third day. This journey is through fairly thickly populated country inhabited by the Teso people. All along the road are shambas of cotton, matama, beans, and bananas. Between Soroti and Katakwe there are large areas of swamp country, and huge causeways are built up for the road. The country is mostly undulating and is timbered with light small trees, and covered with tall grass from 2 to 4 feet high.

The soil is mostly of a light sandy nature. At the camps mentioned there are comfortable rest-houses, built and maintained by the chiefs.

The distances are approximately: Lale to Werra, 16 miles; Werra to Katakwe, 16 miles; Katakwe to Adechal, 15 miles. Komolo is about 6 miles from Werra, but there is no rest-house there now, and a cotton ginnery is about to take its place.

From Adechal we travel on to Moroto, via Okwangazi, Matang, and Kangole. To all purposes Adechal is the end of the earth, and from here we leave the large native road and take to a small footpath.

The camps generally slept at are Okwangazi and Kangole, but the traveller needs to be careful going through here to enjoy the greatest comfort.

Firstly, all water vessels have to be filled, as the water supply at the next station cannot be depended on, especially during the dry season.

Having camped at Okwangazi, to water or otherwise, it is wise to make a very early start, say 4 A.M., for the next water, Matang. Rest there during the heat of the day, and then push on in the late afternoon to Kangole, for the night.

By doing this the *safaris* are equalised thus :—Adechal to Okwangazi, 16 miles ; Okwangazi to Matang, 17 miles ; Matang to Kangole, 5 miles (these two in one day), and Kangole to Moroto, 18 miles.

From Adechal to Matang no natives are met with, but near the latter place we come into the Karamojon, a tribe of unusually big, powerful people, with the finest native cattle I have ever set eyes on, and who cultivate matama for their larder.

The country between Adechal and Okwangazi is flat, and during the rains would be very soft and sticky, and is covered with scattered timber, mostly small mimosa and thick rank grass. The soil is generally described as black cotton.

From Okwangazi to Moroto the country is very similar, the prevailing timber being mimosa, but the grass is not so long. The soil is black cotton. Approaching Moroto the timber takes the form of belts of thorn bush about 6 to 8 feet high, and this is awful stuff to have an encounter with.

On the road from Adechal to Moroto there are some fine hills to be seen ; Mt. Kamalinga is a few miles south of Okwangazi, whilst always ahead looms up the huge outline of Mt. Moroto. Mt. Dabasain and the Suk Hill show up prominently to the south and south-east, and the Labor Hill in Karamoja are conspicuous to the north. Mt. Elgon is to be seen farther back towards Soroti.

When leaving Adechal we thought that we were leaving the haunts of man, and what a surprise awaited us when we reached Moroto Post !

We kept on climbing, and the farther we advanced so much farther the mountain seemed to retire, until thoroughly tired we suddenly came upon a large clearing in a big horse-shoe ravine, containing all manner of tents and grass huts. This we discovered to be the Base Hospital and stores of the K.A.R.s. On three sides the hills rise precipitously, and on the western side a good view is obtainable over all the Karamoja Plains. The ravine itself is thickly timbered. A fine stream, full of leeches, rises in the mountains behind the Post.

Hitherto, from Soroti we had been travelling in a north-easterly direction, but now we swing round and go practically

north, generally following the contour of the mountain. After about 10 miles we reached the Moroto River Camp ; another 5 miles on we came to where the road winds round like a snake and descends the escarpment.

The country round Moroto and the escarpment is covered with thick scrub and mimosa, and along the watercourses larger trees are seen. This area swarms with Francolin, Guineafowl, and small Buck. Small herds of Lesser Kudu also are in evidence.

Travelling on down the escarpment by various windings we come to a camp called Munyen, about 12 miles from Moroto River.

This district is now Turkanaland, and until the K.A.R. Expedition crossed its borders was practically unexplored. The country is very hostile and we were compelled to travel with armed escort. It was from this district that most of the birds were collected.

The change in climate and scenery was marked ; instead of the cool and fresh green of the escarpment, here we have nothing but miles of wait-a-bit scrub and sand, and loose sharp shingle.

At Munyen water is obtained from a deep rock-hole in the Kozibiri River, which fills up with the rains. From Munyen the road follows the Kozibiri up to Meuressi, where the Kozibiri joins the Turkwell, the latter being the main river of the country, coming down from Elgon. The various camps are Munyen, Nataparin, Nakurumunyen, Lorobumu, Meuressi, general direction from Munyen north-east. Distance from Moroto to Meuressi, 67 miles.

The water at the camping places is obtained by digging in the sand of the river-beds, but at about 2 miles from Nataparin Camp there is a fair area covered with salt springs, and to these in the dry weather come herds of elephant and rhino to drink. Around all the camps birds abound. It is a wonderful sight to see the sandgrouse coming to drink at sunset, they are literally in thousands.

At Meuressi there is a small K.A.R. post ; this was formerly the headquarters of the Turkana Force, but now the only signs of its greatness were the crowds of marabout storks,

eagles, and vultures, and such-like scavengers. A certain amount of game is to be seen.

The course of the Kozibiri River is interesting. When travelling along one cannot help but notice that either the river must have been very much bigger at some date or else it had altered its course. The present actual river-bed is well defined, but on either side for some distance up to a quarter of a mile there is heavy sand, as if deposited by the action of the water, and then there is a bank of about 6 feet up to the stone and shingle.

The present actual bed of the river winds about from side to side of this greater valley. The same applies to the Turkwell, only in a greater degree.

The next stage of the journey takes us to Kobua River at Rudolph. The camping grounds are Skull Camp, Lodwar, Kobua waterholes, and then on to Rudolph, about 61 miles.

The first two stages to Lodwar follow the Turkwell. Water is obtained by digging in the river-bed if the river is not running. Along the Turkwell there is a thick fringe of timber and scrub, and the country is sandy. Away from the river the country is all rough stony plain, covered with horrible thorny bush.

There is a fine outcrop of hill at Lodwar, running north-west and parallel to another river called the Kagwalla, this river rising on the north side of the Murissica Mountains. The prominent peak of this range is an important landmark and when climbing it appears to be nothing but a heap of volcanic shingle. From Meuressi to Lodwar the Turkwell runs practically north, but at Lodwar it takes a bend round to east and follows this general direction right on to Rudolph.

The Turkana in this district were aggressive and attacked a small patrol of Askaris one night. They didn't count on the sentry being awake! When he fired at them he killed two with one shot. The skulls of these two Turkana adorn the outskirts of the camp and give to it the name Skull Camp.

At Lodwar we leave the Turkwell and take to the desert track which runs to Kobua waterholes. This is a long waterless track and very hot, so we started at four in the afternoon and travelled all night, reaching the waterholes next morning.

The country is flat stony plain, covered with the eternal thorn bush.

Just a few miles before the waterholes we entered a low range of hills, running north and south, which extend from the Turkwell on the south up to the Labur Mountains, a distance of about 100 miles. Along the road they are about 8 miles wide.

The general direction Lodwar to Kobua waterholes is north-east. Kobua waterholes to Kobua River north-east by east.

The next morning we marched into Kobua Camp, which was at that time the headquarters of the Force. The scenery round the shore is improved by the presence of stately Dom palms, but farther back from the lake the same thick scrub and thorn bush is in evidence.

The soil here is sandy and covered with large numbers of shells, indicating that Rudolph must have covered this area at some remote time.

The great attraction at Kobua Camp is naturally the lake. We could not take our eyes off the beautiful expanse of blue water, especially after the country we had come through; and the breeze—well, I can only leave the reader to imagine it!

Upon our arrival we interrupted a battle royal between a scorpion and a tarantula. We found all the European officers, except those on patrol duty, standing open-mouthed watching this. One stout civil official acted as bookmaker, and bets on the issue were flying around.

I think the picture I have painted of Turkanaland is pretty black, but to kill any doubts let me mention a few of the vermin. Scorpions there are in thousands, some black, others brown, of huge size, and these secrete themselves under boxes and such like and woe betide the unfortunate individual who goes to lift the box. Nearly all the officers were bitten at one time or another.

The largest centipede I ever saw was here. Tarantulas abound among the palms and hold their nightly *ngomas*.

The one redeeming feature of Turkanaland is Lake Rudolph. It is not like other lakes in East Africa. Here are beautiful

sandy beaches, most perfect for bathing, despite the crocodiles. Bird-life teems; duck, pelicans, egret, and flamingo exist in countless numbers. I once saw 40 acres covered by pelicans as close as they could sit.

The reader will see from this introduction that the collection of birds comes from a district practically unexplored, and only just opened up by the military operations, and will realise the difficulties which had to be contended with in getting together such a remarkably interesting series.

NECTARINIIDÆ

1. *Nectarinia pulchella*. Linn. Green-bellied, long-tailed Sunbird.

♂ 9. Kobua River, W. Rudolph. March 1918.

♀ 12. Meouessi, Turkwell River. January 1918.

Juv. 4. Meouessi, Turkwell River. January 1918.

It is interesting to note that the birds collected in January are all in heavy moult and assuming the adult plumage, while those shot in March are in full breeding dress.

Exactly where *N. pulchella* meets *N. melanogaster* it is difficult to say at present, but *N. melanogaster* has been collected at Kacheliba.

2. *Hedydipna platura karamojæ*. van Someren, *B.B.O.C.*, February 1920. Yellow-breasted, long-tailed Sunbird.

♂ 3 } Mt. Kamalinga and Kimolo, N.E. Soroti,
♀ 1 } November 1917.

This is a well-marked race which is apparently limited to the West and South Rudolph area. The birds are in full, clean, breeding dress.

3. *Chalcomitra senegalensis æquatorialis*. Reich. Ruby-throated Sunbird.

♂ 3. Katachai and Dakabira, N.E. Lale, N.E. Soroti. November 1917.

♂ 3. Young. N.E. Soroti. November 1917.

♀ 2. Moroto. December 1917.

The occurrence of this and the next species in more or less the same locality is worthy of note.

4. *Chalcomitra hunteri*. Shelley. Hunter's ruby-throated Sunbird.

♂ 1. Adult. Meuressi. January 1918.

This bird does not differ from specimens of this species collected in the Tsavo area in any way, except that the extent of the red feathers of the breast with a blue bar is larger and these feathers are intermixed with those having the yellow bar.

5. *Chalcomitra kirki*. Shelley. Kirk's purple-throated Sunbird.

♂ 3. Adults. Moroto. November and December 1917.

Juv. 3. Moroto. December 1917.

Most are in moult from immature to adult plumage.

6. *Cinnyris cupreus*. Shaw. Copper Sunbird.

♂ 1. Soroti. November 1917.

An adult in full plumage.

7. *Cinnyris mariquensis suahelicus*. Reich. Eastern double-collared Sunbird.

♂ 1. Moroto. December 1917.

It is with some hesitation that I identify this bird as *C. m. suahelicus*, although it agrees perfectly with birds from Kisumu, and does not do so with the birds I have placed under *C. m. osiris*.

Their occurrence together is noteworthy. This species has a blue band separating the coppery green of the throat from the red breast-band, whereas the next species has a purple band. The throat in *C. osiris* is purer green, not coppery green, and the red band is darker, so also is the black of the abdomen.

8. *Cinnyris mariquensis osiris*. Finsch. Northern double-banded Sunbird.

♂ 5 } Moroto and Lale. November and December
♀ 1 } 1917.

Apparently a common species. The males are in full clean dress and are quite distinct from *C. m. suahelicus*.

9. *Cinnyris habessinicus turkane*. van Someren, B.B.O.C., February 1920. Yellow-tufted, red-breasted Sunbird.

♂ 15 }
♀ 3 } Kobua River, W. Rudolph. March 1918.

Most of the males are in full breeding dress.

10. *Cinnyris venustus blicki*. Mearns. Blick's yellow-bellied Sunbird.

♂ 1. Meuressi, Turkwell. January 1918.

Specimens from Kerio and Turkwell bear out Mearns' statement that this northern race is distinct from *C. v. falkensteini*, in being smaller and much more whitish on the belly.

11. *Anthreptes orientalis*. Hartl. Green-rumped, short-billed Sunbird.

♂ 5. Moroto, November 1917; Meuressi, January 1918.

♀ 2. Kobua River, W. Rudolph, March 1918; Meuressi, January 1918.

All the males have a wide green patch on the rump and wing joint.

12. *Anthreptes longmari* (?) Sub-sp. (?) Purple-rumped, short-billed Sunbird.

♀ 2. Dahabira, N.E. Soroti. November 1917.

Two females of the larger species, quite distinct from the males of the preceding species.

ZOSTEROPIDÆ

13. *Zosterops stuhlmani*. Reich. Stuhlman's Ring-eye.

♂ 2 }
♀ 1 } Moroto. December 1917.

Rather paler on the back than *Z. jacksoni* from North Elgon, and agreeing much better with *Z. stuhlmani*, though the under-surface is a clearer yellow.

PARIDÆ

14. *Parus albiventris*. Shelley. White-bellied Tit.

♂ 2. Moroto. 1917.

One bird is obviously young, and has the front of the head brownish.

15. *Parus leucomelas*. Rupp. Blue-black Tit.

♂ 1. Komolo, N.E. Soroti. November 1917.

16. *Anthoscopus musculus*. Sub-sp. (?) Buff-bellied Penduline Tit.

♂ 2. Meuressi. January 1918.

These birds appear to be intermediate between *A. punctifrons* from N.E. Africa and *A. rocatti* of Uganda. From *A. punctifrons* they differ in being much more isabelline on the under-surface, and lacking the black on the forehead feathers. These birds are matched fairly well by specimens from Magadi district and Tsavo, though these latter are not so greenish on the back.

MOTACILLIDÆ

17. *Motacilla raii*. Linn. European yellow Wagtail.

♂ 2. Kobua River, W. Rudolph.

Both in fresh summer dress, with heads yellow, washed with olive.

On comparing these birds with specimens collected round Nairobi, I was surprised to note the extraordinary variety of plumages in these birds, and, on consulting the latest works on British birds, can find not more than four birds in summer dress in my large series (forty skins) which agree either with the coloured plate or with the description of *M. raii*. It is possible that the birds with completely canary-yellow heads belong to a distinct race.

18. *Motacilla flava*. Linn. Blue-headed Wagtail.

♂ 6. Soroti and Kobua River. November 1917 and March 1918.

♀ 1. (Albinistic) Soroti. 1917.

In this species also one meets with great variation, especially in the intensity of the colour of the underside, so also in the colour of the head. In some cases the ear-coverts are grey, streaked with white, and a few have them black.

19. *Motacilla cinereicapilla*. Savin. Grey-headed Wagtail.

♂ 1. Kobua River, W. Rudolph. March 1918.

Very dark on the head, but possessing a few white feathers at the lores.

20. *Anthus trivialis*. Linn. European Tree-pipit.

♂ 3. Kobua River, W. Rudolph. March 1918.

In full breeding dress, with very ochraceous breasts.

21. *Anthus cervinus*. Pall. Red-throated Pipit.

♂ 4 }
♀ 2 } Kobua River, W. Rudolph. March 1918.

Two males are in practically full dress, while the other two are in heavy moult and show patches of red on the throat. The females are also in moult and retain most of their worn winter dress.

22. *Anthus nicholsoni longirostris*. Neum. Greater speckled-back Pipit.

♂ 1. Kobua River, W. Rudolph. March 1918.

This specimen has an exceptionally wide superciliary stripe.

23. *Macronyx croceus*. Vieill. Yellow-breasted Lark.

♂ 1. Soroti. November 1917.

Moulting; the old feathers giving it rather a greyer appearance on the back than usual.

ALAUDIDÆ

24. *Mirafra africana tropicalis*. Hartert. Northern red-winged Lark.

♂ 1. Moroto. November 1917.

In full clean plumage.

25. *Mirafra albicauda*. Sub-sp. (?) Intermediate.

♂ 1. Moroto. November 1917.

Very like birds from Magadi and Nakuru Lake, but darker than the Magadi specimens.

26. *Mirafra cantilans*. Sub-sp. (?)

♂ 1. Soroti. November 1917.

Much darker than *M. fischeri* from Kisumu.

27. *Galerita cristata erythrea*. Zedlitz. African crested Lark.

♂ 3
♀ 2 } Kobua River, W. Rudolph. March 1918.

All in worn dress. A pair collected on the 13th are larger and much greyer and have the spotting of the crop larger and more distinct, wings 104-6 mm.; whereas the two other birds are smaller and more ochraceous above and below, have wings of 94-7 mm. The flanks are not so distinctly streaked, and the outer tail-feathers are more pinkish buff. These may belong to another of the numerous sub-species of *G. cristata*.

These birds may be sexed wrongly, but having no

specimens with which to compare them I can come to no definite conclusion.

28. *Pyrrhuloxia signata*. Oust. Chocolate-faced Finch Lark.

♂ 5 }
 ♀ 2 } Kobua River, W. Rudolph. March 1918.
 Juv. 1 }

One adult in full clean dress has wide edges to the coverts, giving the wings a striped appearance; most of the males are slightly worn, and one very much worn is decidedly darker brown on the back, not greyish, thus giving it an altogether darker plumage. Not having specimens from the type locality I am unable to decide whether *P. s. harrisoni* from Rudolph is separable from the Somali birds.

29. *Pyrrhuloxia leucotis smithii*. Bpt. (?) Sub-sp. Chestnut-backed Finch Lark.

♂ 1 }
 ♀ 1 } Kamalinga Mt., Karamoja.

Both birds in excellent plumage.

FRINGILLIDÆ

30. *Emberiza flaviventris*. Steph. Yellow-breasted Bunting.

1. Moroto. November 1917.

31. *Petronia massaica*. Neum. Yellow-throated Sparrow.

♂ 1. Moroto. January 1918.

♀ 3. Meuressi. January 1918 and November 1917.

These birds do not differ from those collected at Tsavo and the 'Dry Belt,' and I have adopted Neumann's name for specimens obtained.

32. *Passer abyssinicus*. Grey-headed Sparrow.

♂ 1. Meuressi, Turkwell River.

Quite distinct from *Passer diffusus ugandæ*, being much larger and heavier built in every way.

This bird is rather more red on the back than E. African specimens, and differs in the colour of the bill, which instead of being black is brownish horn above and ochre-yellow at the basal half of the lower mandible.

33. *Passer shelleyi*. Sharpe. Shelley's black-throated Sparrow.

♂ 1 }
 ♀ 1 } Mt. Kamalinga, Karamoja.

Agrees perfectly with description of type (the only specimen known) and plate of this specimen in having the black and white ear-coverts.

The occurrence of this bird in this district extends its known range considerably.

PLOCEIDÆ

Viduinæ

34. *Linura fischeri*. Reich. Fischer's straw-tailed Whydah.

♂ 1. Meuressi, Turkwell. January 1918.

A single specimen in heavy moult with the remains of the straw tail still retained.

35. *Steganura paradisea verreauxi* (?) Paradise Whydah.

♂ 1. Meuressi, Turkwell. January 1918.

An adult in full breeding dress was the only one noted in this district.

36. *Quelea sanguineirostris centralis*. van Someren. Pale-headed Dioch.

♂ 3
♀ 2 } Kobua River, W. Rudolph.

All in non-breeding plumage. One male is assuming the full dress and has the straw-coloured head, but lacks any trace of black on the cheeks and the ear-coverts. The bill is slightly heavier than birds from Nairobi district, but similarly plumaged birds to this male are to be found round Nairobi.

ESTRILDINÆ

37. *Amadina fasciata alexanderi*. Cut-throat Finch.

♂ 1
♀ 1 } Meuressi, Turkwell River.

Both in full plumage.

38. *Uroloncha canticeps*. Shelley. White-rumped Silver-bill.

♂ 2
♀ 3 } Meuressi, Turkwell. January 1918.

All in clean dress. Rather more rufous on the breast than southern specimens.

39. *Uroloncha cantans meridionalis*. Mearns. Black-rumped Silver-bill.

♂ 1 }
♀ 2 } Meuressi, Turkwell River. January 1918.

One female is in full clean dress and is more boldly marked than the other, the scaly feathers on the head are more pronounced.

40. *Uræginthus bengalus ugandæ*. Zedl. Uganda ruby-cheeked Cordon Blue.

♂ 3 } Moroto. November and December 1917.
♀ 1 } Meuressi. January 1918.

The female has the blue of the chin, throat, and breast continuous; the back a dark hair brown, as in Uganda birds, and differs from Tsavo birds which belong to a recognisable sub-species.

41. *Granitina ianthogaster ugandæ*. van Someren. *B.B.O.C.*, 1919.

♂ 1 }
♀ 1 } Meuressi, Turkwell. January 1918.

Quite distinct from *G. roosevelti*; more like birds from Simba, Tsavo, and Taveta.

42. *Estrilda rhodopyga*. Sund. Red-winged Wax-bill.

♂ 4 }
♀ 4 } Meuressi, Turkwell. January 1918.

When laid out in series along with specimens from Nairobi it is quite apparent that the Meuressi birds are certainly browner on the mantle; the throat and cheeks from Nairobi specimens are whiter.

43. *Estrilda charmosyna* (?) Reich. Somali masked Wax-bill.

♂ 1. Meuressi, Turkwell River.

This group requires further study, for there are apparently four distinct forms: *E. erythronota*, *E. delamerei*, *E. charmosyna*, and an intermediate form found from Simba to Tsavo, south to Taveta. (Since named *Kiwanukæ*, van Someren.)

The specimen obtained from Meuressi is exactly matched by specimens obtained at Kerio River, South Rudolph. Assuming that these (Turkana birds) are *E. charmosyna*, they are the palest of the group, having a pale brownish

back faintly washed pink and barred. The under-surface pinkish buff with a trace of black feathers restricted to the angle of the lower mandible, and no black on the undertail-coverts.

From Simba to Tsavo and Taveta is found a bird intermediate between *E. charmosyna* and *E. delamerei*, but nearer to the former.

This has the mantle decidedly greyish, faintly barred and tinged with pink; and the underside also greyish, washed pink, with a deeper shade of pink on the flanks; the amount of black on the chin larger than in *E. charmosyna* but not so large or so decided as in *E. delamerei*, which is very near to *E. erythronota*.

E. delamerei is altogether darker and has black on the lower breast, abdomen, and undertail-coverts. Thus the dark bird comes between the two pale birds in distribution.

44. *Lagonosticta rhodopareia*. Northern black-vented Fire Finch.

♂ 2 }
♀ 1 } Moroto. December 1917.

The black-vented Fire Finches of E. Africa and Uganda also require revision.

In comparing these birds with my series it is obvious that there are four forms:

(1) *L. congica*, from W. Uganda, having dark greyish hair brown on the mantle, and heads decidedly pinkish.
(2) *L. congica umbiventis*, sub-sp. (3 ♂ and 2 ♀ breeding) from Kenia and Embu district, much more brownish on the back and closer to *L. jamesoni*, and having the black of the belly broadly outlined with golden brownish, more brownish than the underside of the female of *L. congica*. (3) The Moroto birds (typical *rhodopareia*). These have little or no pinkish on the crown, but have red on the forehead and lores, much brighter than the red on the breast, and dark mantles like the Nairobi birds; and lastly *L. r. hildebrandti*, of Central East Africa to coast.

L. jamesoni is a species with one race.

45. *Pytilia soudanensis*. Sharpe. Northern Fire-throated Finch.

| | | | |
|---|---|---|---------------------------|
| ♂ | 2 | } | Moroto. December 1917. |
| ♀ | 1 | | |
| ♂ | 4 | } | Meuressi, Turkwell River. |
| ♀ | 1 | | |

The Moroto birds do not differ from those collected at Meuressi, all show bars on the undertail-coverts, some distinct and sharply defined, others pale and hardly visible. The Meuressi female has uniform pale buff undertail-coverts, that from Moroto faintly barred.

The colour of the red on the throat varies. Wings 60-62 mm. Birds from Tsavo and district are smaller, having wings of 55-56 mm., so also are birds from the coast, Mombasa, and Manda Island.

46. *Sporopipes frontalis*. Daud. Speckle-headed Weaver Finch.

| | | | |
|---|---|---|---|
| ♂ | 2 | } | Moroto, November and December 1917 ; Meuressi, January 1918. |
| ♀ | 1 | | |

The female has much greyer cheeks than the males, and has the spotting on the forehead smaller.

47. *Dinemella dinemelli*. Rüpp. White-headed Giant Weaver.

| | | | |
|---|---|---|-------------------------|
| ♂ | 2 | } | Meuressi. January 1918. |
| ♀ | 1 | | |

Plumage rather soiled.

48. *Textor albirostris*. Vieill. White-billed Giant Weaver.

| | | | |
|---|----|---|---------------------------------------|
| ♂ | 7 | } | Moroto. December 1917 ; January 1918. |
| ♀ | 10 | | |

All the male specimens, with the exception of two, are in off-plumage or young. Two females are adult and in breeding dress. The two males have the bills only just turning white, and the 'penis-like' growth in front of the anal opening just beginning to show.

Apparently these birds do not develop the swollen bill and 'penis' except in the breeding season.

49. *Plocepasser melanorhynchus*. Rüpp. White-rumped Weaver.

| | | | |
|---|---|---|--|
| ♂ | 3 | } | Kobua River, W. Rudolph. March 1918. Meuressi and Turkwell. January and February 1918. |
| ♀ | 2 | | |

In full clean dress.

50. *Plocepasser superciliosus*. Cretzm. Red-crowned Weaver.

♂ 3 }
♀ 2 } Moroto. November and December 1918.

In good condition.

51. *Anaplectes melanotis*. Lafr. Red-fronted Weaver.

♂ 4 }
♀ 2 } Moroto. November and December 1917.

Two males in full plumage and two in the intermediate stage. One female has the primaries and secondaries edged with yellow, not red—possibly a young bird.

52. *Ploceus rubiginosus*. Rüpp. Black-headed chestnut Weaver.

♂ 1 }
♀ 2 } Meuressi, Turkwell River. January 1918.

The female is in off-plumage and shows no signs of moulting.

53. *Ploceus intermedius*. Medium black-headed Weaver.

♂ 4 }
♀ 5 } Meuressi, Turkwell. January 1918.

Two males almost in full plumage. The rest in off-plumage.

54. *Ploceus luteola*. Licht. Little thick-billed black-faced Weaver.

♂ 2 } Kobua River, W. Rudolph.
Juv. 1 } Meuressi, Turkwell. January 1918.

Neither of the males are in breeding dress, and the female is obviously young.

ORIOLIDÆ

55. *Oriolus roletti*. Salvad. Rolett's black-headed Oriole.

♂ 2. Moroto, November 1917; Kobua River, W. Rudolph, February 1918.

♀ 1. Meuressi. January 1918.

The bird from Moroto is much more olive-green on the back than the other two.

56. *Oriolus auratus*. Vieill. African Golden Oriole.

♂ 1. Moroto. December 1917.

A fine bird in full plumage.

STURNIDÆ

57. *Pholidauges verreauxi*. Finsch. Purple-backed glossy Starling.

♂ 1 }
♀ 1 } Moroto. November 1917.

Adults in full plumage.

58. *Speculipastor bicolor*. White-winged pied Starling.

♂ 10 }
♀ 7 } Kozibiri River, December 1917; Kobua River,
March 1918; Meuressi, Turkwell, January
1918.

A fine series of adult birds in full breeding dress, seen in flocks. Fed chiefly on the ground.

59. *Amydrus morio rüppelli*. Verr. Rüppell's thick-billed red-winged Starling.

♂ 4 }
♀ 1 } Moroto. November and December 1917.

All adults, in good plumage.

60. *Lamprocornis purpuropterus*. Rüpp. Green-headed, long-tailed glossy Starling.

♂ 1. Meuressi, Turkwell. January 1918.

An adult in good plumage.

61. *Lamprocolius chalybeus*. Ehr. Blue-bellied glossy Starling.

♂ 1 }
♀ 1 } Moroto. December 1918.

Neither have terminal black spots on the secondary coverts. Wings, 140 mm.

62. *Spreo superbus*. Rüpp. White-banded glossy Starling.

♂ 2 }
♀ 3 } Meuressi, January 1918; Kobua River,
Rudolph, March 1918.

Some have no bluish neck-band at the back.

63. *Creatophorus carunculatus*. Gml. Wattled Starling.

♂ 3 }
♀ 2 } Moroto, November 1917; Meuressi, January
1918.

One male is in fully adult plumage, but possesses no wattles. The rest are immature.

DICRURIDÆ

64. *Dicrurus afer* (?) Drongo Shrike.

♂ 2. Moroto, November 1917; Meuressi, January
1918.

Both in bad plumage, though one is fully adult. Wings, 113 mm.

LANIIDÆ

65. *Prionops omoensis*. Neumn. Slaty-naped helmeted Shrike.

♂ 2 }
♀ 1 } Moroto. November and December 1917.

These birds agree with the description of *P. omoensis* exactly, and are similar to birds from Kerio River. They are in full plumage.

66. *Prionops*. Sub-sp. (?) Brown-naped helmeted Shrike.

♂ 1 }
♀ 4 } Meuressi, Turkwell. January 1918.

At first sight I was led to think that these fine birds must be simply the females of the preceding species, but on looking up the sexes I found males and females in both series.

These birds differ from *P. omoensis* in having the hind part of the crown, the occipital region, and sides of the neck brownish grey, with a darker line of brown down the posterior half of the ear-coverts, and having the throat slightly tinged with brown. In size they agree, having wings of 120–123 mm. Other differences are the absence of any well-marked white neck-band (this is washed brown) and the much larger white tips to the secondaries and primaries.

67. *Laniarius funebris*. Sooty Shrike.

♂ 4. Moroto, November 1917; Meuressi, Turkwell, January 1918.

♀ 1. Moroto. December 1917.

68. *Laniarius erythrogaster*. Cretz. Red-bellied Shrike.

♂ 3 }
♀ 1 } Soroti. December 1917.

All adults in good plumage.

69. *Dryoscopus malzacii nyanzæ*. Neum. Northern grey-shouldered Shrike.

♂ 2. Meuressi, Turkwell. January 1918.

♀ 3. Moroto, December 1917; and Komolo, November 1917.

70. *Tschagra senegala*. Linn. Greater red-winged Bush Shrike.

(Sex not stated) 1. Mt. Kamalinga, Karamoja.
November 1918.

Of the many sub-species described, this bird agrees most readily with *T. s. orientalis*, and not *armena*. The superciliary stripe is white in front and yellowish-brown posteriorly. The underside is decidedly grey, contrasting with the white throat and centre of the belly.

71. *Tschagra australis emini* (?) Reich. Lesser red-winged Bush Shrike.

(Sex ?) Adult. Moroto. December 1917.

I cannot refer this specimen with certainty to any of the described species. It agrees most readily with Neumann's *T. dohertyi*, which is supposed to be synonymous with *T. emini*, but it is altogether much darker and larger, having a strong wash of olivaceous on the chest and sides of breast, and very dark olivaceous on the flanks and undertail-coverts. The back, from the crown to the rump, is dark brown; while the superciliary stripe is strongly ochraceous. The chestnut of the wings is much darker. Wings 80 mm.

72. *Corvinella corvina affinis*. Heugl. Giant yellow-billed Shrike.

♂ 3. Moroto. November and December 1917.

Adults in clean full dress.

73. *Fiscus somalicus mauritii*. Neum. Grey-backed Shrike.

♂ 2. Meouessi, Turkwell. January 1918.

Both birds bear traces of the young plumage.

74. *Fiscus excubitorius princeps*. Cab. Great grey Shrike.

♂ 1. Katachai, N.E. Lale.

Wings, 111 mm.

75. *Lanius minor*. Gml. European lesser grey Shrike.

♂ 2. Meouessi, Turkwell, January 1918; Kobua River, W. Rudolph, March 1918.

♀ 1. Meouessi. January 1918.

In summer dress; but skins rather soiled owing to the amount of fat. The female specimen has traces of white on the forehead.

76. *Lanius collurio*. Linn. European red-backed Shrike.

♂ 1. Kobua River, W. Rudolph. March 1918.

A full-plumaged bird in clean condition.

77. *Lanius isabellinus*. Heugl. Eastern red-tailed Shrike.

♂ 1. Kobua River, W. Rudolph. March 1918.

In clean summer dress.

78. *Malaconotus approximans* (?) Chestnut-breasted thick-billed Shrike.

♂ 6 } Meuressi, Turkwell, January 1918; Moroto,
♀ 5 } December 1917.

All these are adult birds and in good plumage. The intensity of the breast-band varies considerably in various specimens, but in the majority it is well marked, more so than in specimens from Nairobi, yet not so marked as in skins from Lamu and Mombasa. These have the band of an entirely different shade of brown, and in my report on the Lamu birds I referred the coast specimens to *M. hypopyrrhus*.

M. catharoxanthus, a bird with uniform yellow under-surface, has been obtained from Elgon and district. Wings from 127-128 mm. The wings of the Moroto specimens and those from Meuressi vary from 110-120 mm.

79. *Chlorophoneus sulphureopectus similis*. Smith. Eastern yellow-bellied Shrike.

♂ 9 } Moroto, November and December 1917;
Juv. 2 } Meuressi, Turkwell, January 1918.

In this series some birds have uniform black ear-coverts, others black fading into grey. Those with black ear-coverts are the more richly coloured.

80. *Eurocephalus rüppelli*. Reich. White-headed Shrike.

♂ 2 } Meuressi, Turkwell, January 1918; Moroto,
♀ 3 } December 1917.

In full plumage, but rather soiled.

81. *Nilaus afer minor*. Sharpe. Brown-flanked Bush Shrike

♂ 1. Meuressi, Turkwell. January 1918.

A bird with pale yellowish-brown flanks.

82. *Nilaus afer erythrea* (?) Neumn. Chestnut-flanked Bush Shrike.

(Sex ?) Lale. November 1917.

Flank stripe, dark chestnut, not continuous but broken.

CAMPEPHAGIDÆ

83. *Campephaga phœnicea*. Latham. Red-shouldered Cuckoo-Shrike.

♂ 1 } Lale, November 1917; Moroto, December 1918.
♀ 2 }

84. *Campephaga hartlaubi*. Salvad. Yellow-shouldered Cuckoo-Shrike.

♂ 1. Kobua River, W. Rudolph.

CRATEROPIDÆ

85. *Argya rubiginosa heuglini*. Sharpe. Northern brown babbling Thrush.

♂ 3 } Meuressi, January 1918; Moroto, December
♀ 2 } 1917.

One specimen with wings of 93 mm. from Meuressi. The remainder 85–87 mm.

86. *Crateropus cinereus buxtoni*. Sharpe. Buxton's babbling Thrush.

♂ 1. Lale, Soroti. November 1917.

♀ 1. Lale, Soroti, November 1917; and Meuressi, January 1918.

PYCNONOTIDÆ

87. *Pycnonotus barbatus minor*. Brown-headed, yellow-vented Bulbul.

♂ 1. Moroto. December 1917.

88. *Phyllastrephus pauper*. Sharpe. Brown-backed Bush Bulbul.

♂ 4. } Meuressi, January 1918; Moroto, December
♀ 3. } 1917.

SYLVIIDÆ

89. *Eremomelas elegans elgonensis*. van Someren. White-throated Golden Warbler.

♂ 3. Soroti and Komolo, N.E. Soroti.

In clean full dress.

90. *Eremomelas flavieristalis*. Sharpe. Lesser yellow-vented Scrub Warbler.

♂ 5. Moroto. December 1917.

♀ 1. Meuressi. January 1918.

These adult birds have the yellow limited to the vent region. They are distinctly paler and smaller than birds from Nairobi, Simba, Tsavo, and Voi districts.

91. *Prinia intermedia* (?) Jack. White-eyebrowed Scrub Warbler.

♂ 4. Meuressi. January 1918.

1 Juv. Moroto. December 1917.

A pale bird, much lighter in colour than *P. mystacea* from Uganda and East Africa.

One young bird from Moroto belongs to the common form found in Uganda.

92. *Camaroptera griseoviridis*. Mull. Green-winged Scrub Warbler.

♂ 3 } Moroto. December 1917.
♀ 1 }

Rather browner on the head than Uganda specimens, but similar to Nairobi and Nakuru birds.

93. *Sylvietta jacksoni*. Sharpe. Jackson's short-tailed Warbler.

♂ 2. Moroto, December 1917; Meuressi, January 1918.

Wings, 60 mm.

94. *Sylvietta brachyma leucopsis*. Reich. Northern pale-bellied short-tailed Warbler.

(Sex ?) 2. Adults.

Wings, 51-56 mm. Throat tinged isabelline, not pure white.

95. *Apalis rufifrons*. Sub-sp. Red-headed Scrub Warbler.

♂ 2. Meuressi, Turkwell River. January 1918.

Apparently a new form.

96. *Apalis pulchella*. Cretz. Little Buff-bellied Scrub Warbler.

♂ 3 } Moroto. December 1917.
♀ 1 }

97. *Eupirnoides karamojæ*. van Someren. White-winged Warbler.

♂ 1. Mt. Kamalinga.

I cannot place this bird amongst the known described species. It is nearest to *A. cinerea*, but differs in having the head and back uniform grey in colour, slightly browner on the wings, the inner secondaries with broad white edges. The centre tail-feathers jet black, the next pair white tipped, the remainder pure white; a white stripe from nostril to anterior angle of the eye; lores, blackish grey. Wings, 48 mm.

I have described this as new.

98. *Calamonastes simplex*. Cab.

♂ 1 }
♀ 3 } Meuressi, Turkwell. January 1918.

99. *Cisticola terrestris uropygialis*. Fraser. Little brown-rumped Grass Warbler.

♂ 2. Soroti, November 1917; Kobua River, W. Rudolph, March 1918.

Rather browner and more rufous on the rump than *C. t. ugandæ* and nearer to *C. uropygialis*.

100. *Cisticola rufa hypoxantha*. Reich. Little mottled-back Warbler.

(Sex ?) Adult. Moroto. November 1917.

Wings, 42 mm. In size similar to *C. rufa*, but with a mottled back, not uniform.

101. *Cisticola* sp. (?)

(Sex ?) 2. Mt. Kamalinga and Karamoja.

A species very much like *subruficapilla fischeri*, but smaller and having the inner webs of the wing-feathers white, not rusty, and lacking the yellow-brown edges on the outer webs.

102. *Acrocephalus palustris*. Bechst. Marsh Warbler.

♂ 1. Kobua River, W. Rudolph. March 1918.

In soiled and worn plumage.

103. *Hypolais pallida*. Hemp. Pallid Marsh Warbler.

♂ 1 }
♀ 1 } Meuressi, Turkwell, January 1918; Kobua
River, W. Rudolph, March 1918.

Neither in full summer dress.

104. *Phylloscopus trochilis*. Linn. European Willow Warbler.

♂ 2. Moroto, December 1917; and Kobua River, March 1918.

♀ 2. Moroto, December 1917; and Kobua River.
Wings 62-71 mm.

There is considerable variation in plumage. The bird with the longest wing having a dark crop-band, tinged brownish.

105. *Sylvia sylvia*. Linn. White-throat Warbler.

♂ 3. Kobua River. March 1918.

Two males are in full summer dress, the other is immature and much worn, and shows no signs of moulting.

106. *Sylvia nisoria*. Bechst. Barred Warbler.

♂ 10 } Meuressi, January 1918; Turkwell and Kobua
♀ 7 } River, W. Rudolph, March 1918.

This bird, although not supposed to migrate farther south than North-East Africa, has now been taken from the localities mentioned above, and from Simba, Tsavo, and Voi area.

In this series they are quite young birds, in first plumage, which shows no signs of barring, nor are they moulting.

TURDIDÆ

107. *Erythropygia leucoptera*. Rüpp. Red-backed Scrub Chat.

♂ 2. Meuressi, Turkwell. January 1918.

108. *Agrobates galactotes minor*. Cab. Grey-backed Scrub Warbler.

♂ 6 }
♀ 2 } Kobua River, W. Rudolph.

Wings 86-93 mm.

Some variation in colour and similar to birds from Tsavo and Taveta.

109. *Cichladus guttata*. Reich. Spotted - breasted Ground Thrush.

♂ 4. Moroto. November 1917.

♀ 3. Meuressi. January 1918.

Wings 85-92 mm.

Similar to birds from Kerio River in being much browner on the back, and considerably larger than birds from the coast to as far inland as Simba.

110. *Luscinia luscinia*. Linn. European Nightingale.

(Sex ?) Adult. Moroto. January 1917.

111. *Cossypha heuglini*. Hartl. Heuglin's Robin Chat.

♂ 1 }
♀ 2 } Moroto. November and December 1917.

Wings 108 mm.

Generally larger than birds from more southern localities and having a broader white superciliary stripe; the brown of the tail lighter in colour. But these birds can be matched with specimens from Elgon.

112. *Monticola saxatilis*. Linn. European Rock-thrush.

♂ 3. Lale, November 1917; Moroto, December 1917; Kobua River, March 1918.

♀ 1. Meuressi, Turkwell. January 1918.

In various stages of moult into summer plumage.

113. *Monticola rufocinerea*. Rüpp. Abyssinian Rock-thrush.

♂ 1 }
♀ 1 } Moroto. November 1917.

In full plumage and good condition.

114. *Turdus pelios*. Sub-sp. (?) Northern brown-flanked Thrush.

♂ 1. Komolo. November 1917.

Much paler on the underside than birds from South Uganda, and lacking the olive tinge on the upper surface.

115. *Carcomela fuscicaudata turkana*. van Someren. B.B.O.C.; 1920. Grey Desert Chat.

♂ 1. Kobua River, W. Rudolph. March 1918.

♀ 2. Meuressi, Turkwell, and Kobua River. March 1918.

116. *Thamnolea subrufipennis*. Reich. Red-bellied Rock Chat.

♂ 1 }
♀ 1 } North-East Lale, Kioga.

A pair in full plumage and good condition.

MUSCICAPIDÆ

117. *Bradornis griseus*. (?) White-throated grey Flycatcher.

♂ 2 }
♀ 2 } Meuressi, Turkwell. January 1918.

All uniform in colour.

Wings 76–82 mm. Rather browner on the back than Tsavo and Kacheliba birds, which have wings of 70–75 mm.

118. *Empidornis kavirondensis*. Neumn. Grey and brown Flycatcher.

♂ 5. Soroti, November 1917; Lali, November 1917.

♀ 2. Lali. November 1917.

These specimens do not differ from birds from Kavirondo and Suk.

119. *Batis puella*. Reich. Brown-throated puff-back Flycatcher.

♂ 1. Moroto. December 1917.

120. *Tchitrea suahelica*. Reich. Paradise Flycatcher.

♂ 6. Moroto, December 1917; and Meuressi, January 1918.

Four in the black and white, old stage; and two in the brown dress.

One old male has a large amount of brown streaks in the otherwise white tail-feathers.

HIRUNDIDÆ

121. *Hirundo rustica*. Linn. European Swallow.

♂ 1

♀ 1

} Meuressi, Turkwell. January 1918.

These are pale-breasted birds; neither is in full plumage.

CORACIIDÆ

122. *Coracias naevius sharpei*. Reich. Bronze-wing Roller.

♂ 2. Moroto. December 1917.

♀ 1. Moroto. December 1917.

Wings 180–188 mm.

123. *Coracias abyssinicus*. Bod. Blue-breasted long-tailed Roller.

♂ 4. Kobua River, W. Rudolph.

All in full plumage and excellent condition.

124. *Coracias caudatus*. Linn. Lilac-breasted, long-tailed Roller.

♂ 1. Moroto. December 1917.

♀ 1. Kobua River, W. Rudolph. February 1918.

MEROPIDÆ

125. *Merops nubicus*. Gml. Crimson Bee-eater.

♂ 5 }
♀ 3 } Kobua River. March 1918.

All in full plumage.

126. *Merops persicus*. Pall. Yellow-throated green Bee-eater.

♂ 2. Kobua River, W. Rudolph, 1918.

In breeding dress.

127. *Merops albicollis*. Vieill. White-throated Bee-eater.

♂ 7. Kobua River, W. Rudolph. March 1918.

Full-plumaged birds in good condition.

UPUPIDÆ

128. *Upupa epops*. Linn. European Hoopoe.

♂ 1. Kobua River, W. Rudolph. March 1918.

An undoubted specimen of the European bird with a white bar on the crest separating the rufous of the crest from the black tips.

129. *Irrisor niloticus*. Neum. Blue - throated, red - billed Hoopoe.

♂ 4. }
Juv. 1 } Kobua River, W. Rudolph. March 1918.

According to C. Grant the birds north of the Turkwell are *I. niloticus*. These were obtained on the Kobua River where it flows into Rudolph. These birds can be exactly matched with one from Kerio River, much farther south.

The size of the spots on the tail varies. A young bird with black bill has quite small tail spots.

130. *Rhinopomastus cabanisi*. de Filippi. Orange - billed Hoopoe.

♂ 1 }
♀ 2 } Meuressi, Turkwell. January 1918.

The male is in newly moulted dress and is bluer than birds from Tsavo district, which are shot with purple on the mantle.

BUCEROTIDÆ

131. *Lophoceros jacksoni*. Og.-Grant. Jackson's red-billed Hornbill.

♂ 1. Moroto. December 1917.

An adult in fine clean condition.

132. *Lophoceros nasutus*. Linn. Grey-headed Hornbill.

♂ 1 }
♀ 1 } Moroto. December 1917.

The male is a large bird with wings 238 mm. The female 198 mm.

ALCEDINIDÆ

133. *Ceryle rudis*. Linn. Pied Kingfisher.

♂ 2 }
♀ 2 } Meuressi, Turkwell River.

One adult, and three young showing traces of immature plumage.

COLIIDÆ

134. *Colius macrourus pulcher*. Neum. Blue-naped Coly.

♂ 4 } Moroto, December 1917; Meuressi, January
♀ 3 } 1918.

All darker than coast birds.

MUSOPHAGIDÆ

135. *Turacus leucolophus*. Heugl. White-headed Plantain-eater.

♂ 6 }
♀ 3 } Moroto. December 1917 and April 1918.

All adults in full plumage.

CUCULIDÆ

136. *Cuculus solitarius*. Steph. Brown-breasted Cuckoo.

♂ 3. Kobua River.

One specimen has uniform undertail-coverts, the other two barred. The amount of barring on the breast varies considerably.

137. *Coccyzus cafer*. Licht. Black-throated Crested Cuckoo.
Moroto. 1917.

A young bird in moult.

138. *Coccyzus glandarius*. Linn. Great Spotted Cuckoo.

(Sex ?) Moroto. November 1917.

139. *Chrysococcyx klassi*. Steph. White-breasted Emerald Cuckoo.

♂ 1. Kobua River, W. Rudolph.

INDICATORIDÆ

140. *Indicator variegatus*. Less. Speckle-fronted Honey Guide.

♂ 2. Moroto. November 1917.

One in clean full dress, the other rather soiled and worn.

141. *Indicator indicator*. Gml. Black-throated Honey Guide.

♀ 1. Meuressi. January 1918.

142. *Indicator minor teitensts*. Neum. Medium Green-backed Honey Guide.

♂ 5 } Moroto, December 1917; and Kobua River,
♀ 1 } W. Rudolph.

Wings 80–93 mm.

I am not satisfied with the identification of these birds, although it is in keeping with C. Grant's conclusions.—*Vide* 'Ibis,' July 1915.

These birds are much darker than Nairobi specimens, especially on the crop and the abdomen.

In this series there are two young birds which account for the small wing measurements in two cases—80–82 mm.

143. *Indicator exilis pygmeus* (?) Reich. Small Grey-breasted Honey Guide.

♂ 2. Moroto. November 30, 1917.

These birds are adult and have wings measuring 68 mm. and 69 mm. They are much greyer on the underside than *I. exilis*, thus agreeing better with *I. exilis ansorget*.

CAPITONIDÆ

144. *Lybius ugandæ*. Berger. Uganda Red-headed Barbet.

♂ 2. Komolo and Dakabira, Soroti.

Both in good plumage.

145. *Tricholæma diademata* (?) Red-fronted Barbet.

♂ 2 } Moroto. December 1917.
♀ 2 }

The females are heavily washed with yellow on the underside, one specimen showing a considerable amount of speckling on the abdomen and flanks.

146. *Tricholæma lachrymosa*. Cab. Black-faced Barbet.

♂ 4 } Moroto. December 1917.
♀ 2 }

In clean fresh dress. The pale tips to the lesser wing-coverts being very noticeable.

147. *Barbatula pusillus*. Reich. Little Red-crowned Barbet.

♂ 2. Moroto. December 1917.

In full plumage. Wings 54-55 mm.

148. *Trachyphonus d'arnaudi*. Desmurs. Waxy-headed Barbet.

♂ 2 }
♀ 2 } Moroto. December 1917.

One specimen very worn.

149. *Trachyphonus erythrocephalus*. Red-headed Barbet.

♂ 9. Moroto. December 1917.

♀ 8. Meuressi, Turkwell River. January 1918.

Out of this large series only five have red undertail-coverts.

PICIDÆ

150. *Campothera nubica nubica*. Gmel. Nubian red-headed Woodpecker.

♂ 3. Moroto and Meuressi. January 1918.

Juv. 1. December 1917.

♀ 5. Moroto. December 1917.

In this series great variation exists both as regards the upper- and the under-surfaces. Some males are barred, others spotted on the mantle.

151. *Dendropicus fuscescens massaicus*. Neum. Massai brown-fronted Woodpecker.

♂ 1 }
♀ 1 } Moroto. November and December 1917.

Both adults in good condition.

152. *Thripias namaquus schoensis*. Rüpp. Bearded Woodpecker.

Juv. (?) Meuressi, Turkwell. January 1918.

This is a male bird, but is coloured like a female, except that there are one or two red feathers appearing on the hind part of the crown.

153. *Mesopicus goertae centralis*. Reich. Northern grey-bearded Woodpecker.

♂ 1 }
♀ 1 } Moroto. January 1918.

COLUMBIDÆ

154. *Columba guinea longipennis*. Reich. Eastern Hackled-neck Pigeon.

♂ 2. Kobua River.

Both are young birds in heavy moult.

PSITTACIDÆ

155. *Poicephalus meyeri saturatus*. Sharpe. Yellow-shouldered Parrot.

♂ 1. Moroto. December 1917.

♀ 2. Meuressi. January 1918.

In naming these specimens I laid out the whole of my series of these parrots from Uganda—from localities varying from Western Uganda to Elgon and Rudolph.

From the series before me (thirteen specimens) I cannot agree with C. Grant ('Ibis,' April 1915), that *P. meyeri saturatus* (presuming that all these specimens belong to one race) have, on the average, green under-surfaces and rumps. Out of thirteen, seven have decided bluish rumps and under-surfaces tinged bluish. They are certainly not so blue as specimens of *P. meyeri matschiei* from German East Africa. The Moroto birds can be matched with birds from Elgon and North Kavirondo.

One specimen, adult, is much worn and is moulting. The new feathers of the mantle are decidedly green, with brighter green margins. The other two are dark earthy brown, washed with green.

It is quite possible, and worn specimens appear to corroborate this, that the blueness of the rumps and under-side of Uganda birds depends upon the amount of wear and exposure of these parts.

STRIGIDÆ

156. *Glaucidium perlatum*. Vieill. Little spotted Owlet.

♂ 1 }
♀ 3 } Meuressi. January 1918.

No two are alike with regard to the shape, size, and quantity of the spots on the upper side.

157. *Scoptella leucotis*. White-faced Owl.

(Sex ?) 1. Adult. Rock Abela.

♂ 2. Meuressi, Turkwell, and Kobua River, W. Rudolph.

♀ 2. Kobua River.

Only one adult in good plumage; the remainder of the series are young birds, still retaining a large amount of downy feathers on the flanks and thighs. They lack any black on the crown, while the black shaft streaks of the feathers of the body are narrower and the plumage generally more tinged with brown, particularly on the under-surface.

FALCONIDÆ

158. *Falco minor*. Bp. Lesser Peregrine Falcon.

♂ 1. Meuressi, Turkwell. January 1918.

A single specimen in full plumage and good condition.

159. *Falco ruficollis*. Swains. Red-necked Falcon.

♂ 2. Meuressi, Turkwell, January 1918; Kobua River, March 1918.

The first specimen is fully adult and in good plumage.

The second is still in half immature plumage.

160. *Cerchneis naumanni*. Fleisch. Lesser Kestrel.

♀ 1. Meuressi, Turkwell. January 1918.

One adult female in moult.

161. *Cerchneis arthuri*. Pale Kestrel.

♂ 1. Meuressi, Turkwell. January 1918.

161A. *Melierax gaber*. Daud. Daudin's Goshawk.

♂ 1. Meuressi, Turkwell. January 1918.

Probably a female, judging by its size, though sexed as male. It is in the second plumage.

162. *Astur sphenurus*. Rüpp. Rüppell's Goshawk.

(Sex ?) Meuressi. Turkwell. January 1918.

A young bird assuming the adult plumage.

163. *Phaliohierax semitorquatus*. Pigmy Falconet.

♂ 2. Meuressi, Turkwell. January 1918.

♀ 6. Kozibiri River, December 1917; Moroto, December 1917; Meuressi, January 1918.

The females are young birds in moult to adult plumage.

The chestnut of the back is lighter than in the adults. The secondaries and coverts are tipped with brown.

ARDEIDÆ

164. *Butoroides atricapilla*. Afzel. Little Green-backed Heron.
Juv. 2. Kobua River. March 1918.
Both young birds.

PELICANIDÆ

165. *Phalacrocorax africanus*. Gmel. Little Cormorant.
Juv. 1. Meuressi, Turkwell. January 1918.

LARIDÆ

166. *Hydrochelidon leucoptera*. Meisner. White-winged Black Tern.

♂ 6 }
♀ 2 } Kobua River, W. Rudolph. March 1918.

None in full plumage. These are probably young birds, some of which would no doubt remain throughout the summer.

PHASIANIDÆ

167. *Francolinus granti* (?) Grant's Bush Francolin.
♂ 1. Meuressi, Turkwell.
168. *Philopachus florentice*. Og.-Grant. Lady Delamere's Rock Francolin.
♀ 1. Moroto. December 1917.
The only one obtained, though several were heard.

PTEROCLIDÆ

169. *Pterochlorus exustus ellioti* (?) Bodg. Elliot's Pin-tail Sand Grouse.

♂ 2 }
♀ 2 } Meuressi, Turkwell. January 1918.

One male has the belly brown, like the flanks, and is paler on the back than the other, which has the belly black.

170. *Sarciophorus tectus*. Bodd. Bearded Wattled Plover.
♂ 2. Meuressi, Turkwell. January 1918.
♀ 1. Moroto. December 1917.
Rather soiled below, but otherwise in full dress.

CHARADRIIDÆ

171. *Hoplopterus spinosus*. Linn. Pied Lapwing.
 ♂ 2. Kobua River, March 1918 ; Meuressi, January 1918.
 ♀ 2. Meuressi, Turkwell. January 1918.
 Adults in full plumage.
172. *Charadrius asiaticus*. Pall. Asiatic Dotterel.
 ♂ 3 } Kobua River.
 ♀ 1 }
173. *Charadrius dubius coronicus*. Lesser Ringed Plover.
 ♂ 2 } Kobua River. March 1918.
 ♀ 3 }
- Two males in full breeding dress ; one female is obviously a young of the last season.
174. *Totanus stagnatalis*. Bechst. Marsh Sandpiper.
 ♂ 2. Kobua River. March 1918.
 Not yet in full summer dress.
175. *Totanus glareola*. Linn. Wood Sandpiper.
 ♂ 2. Kobua River, March 1918 ; Meuressi, Turkwell, January 1918.
 Still in moult.
176. *Totanus ochropus*. Linn. Green Sandpiper.
 ♂ 2. Kobua River. March 1918.
177. *Totanus hypoleucos*. Linn. Common Sandpiper.
 ♂ 3. Meuressi, Turkwell, January 1918 ; and Kobua River.
 ♀ 1. Meuressi, Turkwell. January 1918.
178. *Totanus glottis*. Linn. Green Shank.
 ♂ 1. Kobua River, W. Rudolph. March 1918.
 In almost full summer dress.
179. *Tringa subarquata*. Guld. Curlew Sandpiper.
 ♂ 3. Kobua River, W. Rudolph. March 1917.
 None showing much signs of moulting into summer dress.
180. *Tringa minuta*. Leisl. Little Stint.
 ♂ 2. Kobua River, W. Rudolph. March 1918.
 Not as far advanced in the spring moult as one would expect from the date.
181. *Parvoncella pugnax*. Linn. Ruff.
 ♂ 1. Kobua River. March 1918.
 In more winter than summer dress.

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182. *Rhynchea capensis*. Linn. Cape Painted Snipe.
♂ 2. Meuressi. January 1918.
183. *Cedricnemus cedricnemus*. Linn. European Stone Curlew.
♂ 2. Meuressi. January 1918.
Two adults of the European bird in full clean dress.
184. *Rhinoptilus cinctus*. Heugl. Three-collared Courser.
♂ 2. Kobua River, W. Rudolph. March 1918.
Two specimens in perfect plumage.
185. *Cursorius somaliensis*. Blue-naped Courser.
♂ 2. Kobua River, W. Rudolph.
In excellent plumage.
186. *Glareola fulleborni*. African Pratincole.
♂ 2 } Kobua River, W. Rudolph. March 1918.
♀ 2 }
These are resident, and breed in Africa.
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NOTES ON EAST AFRICAN MAMMALIA (OTHER THAN
HORNED UNGULATES) COLLECTED OR KEPT IN
CAPTIVITY 1915-1919. PART I.

BY ARTHUR LOVERIDGE

The following notes are chiefly based on a collection of 500 small mammals made for the British Museum during the campaign in German and Portuguese East Africa.

The principal localities referred to in the late German East Territory are Dar-es-Salaam, Morogoro, Dodoma, and Tabora, all situated on the Central Railway. Moshi, Arusha, and Longido West are in the more northern part of the country, therefore nearer the Anglo-German boundary.

The only locality in Portuguese East mentioned is Lumbo, the site of a British camp on the mainland some three miles from Mozambique Island.

Where measurements are given, the length from nose to tip of tail is usually in inches, followed by millimètre measurements of head and body, tail, hind foot, and ear. In the case of bats the length of wing and across both wings is added.